

Abstract

Restoring data includes providing data in a first storage area of a first type that contains sections of data, providing data in a second storage area of a second type wherein the second type has, for each section of data thereof, at least one of: a pointer to a corresponding section of data of the first storage area and a pointer to corresponding section of data of a third storage area of the first type, providing data in at least one other storage area of the second type, and, for each particular section of data of the second storage area having a pointer to the third storage area, providing to a corresponding section of the first storage area an indirect pointer to a corresponding section of the third storage area if no storage areas of the at least one other storage area point to the corresponding section of the first storage area. Restoring data may also include, for each particular section of data of the second storage area having a pointer to the third storage area, providing to a corresponding section of the first storage area a doubly indirect pointer to a corresponding section of the third storage area if the at least one other storage area points to the corresponding section of the first storage area.